

A Collaboration between Information Specialists and a Public Health Researcher to Investigate Search Strategies in Systematic Reviews in Interdisciplinary Topics: A Progress Report

Bronwen Forster, Liaison Librarian, Nguma-bada Campus, James Cook University

Janet Catterall, Liaison Librarian, Nguma-bada Campus, James Cook University

Alan Clough, Professor of Epidemiology, Nguma-bada Campus, James Cook University

This research collaboration in Northern Queensland comprises a Law Librarian, Health Librarian and a Public Health researcher with an interest in mental health law. This collaboration developed from librarian support of teaching and research in a Public Health postgraduate subject at JCU at Nguma-bada Campus (Cairns). Students were required to develop systematic review protocols for topics in a subject with substance misuse, mental health, regulation and policy content. Published research in this area is typically found in legal as well as health and social care databases. Hence our collaboration described here (Forster & Catterall, 2021; Research Support Community Day 2021, 2021).

Searches revealed that systematic reviews are being undertaken in complex interdisciplinary areas that necessitate both health and legal research. We are curious to investigate the calibre of systematic reviews in these areas. Recognising that the results of a review can only be as robust as the literature search which provides the data set (McGowan et al., 2016; Rethlefsen et al., 2021) our project aims to assess the quality of search strategies in a selection of systematic reviews that span health and legal questions.

Literature searches are being performed in Scopus, Medline (OVID), Westlaw Classic and Lexis Advance. We determined that articles for evaluation needed to address a research question situated at the intersection between mental health and law and include at least one author affiliated with a law department, law school or legal practice. Articles needed to list databases used, search terms and at least one search strategy as run to be included in the analysis. A pilot search of one database, Scopus, resulted in more than 200 articles that potentially would fit these criteria.

The initial article set reflects a surprising diversity of cross discipline subject matter. For example, one systematic review examined the role of evidence from neuroscience in criminal judgement and sentencing (Chandler et al., 2019); another analysed the effect on women's health of United States TRAP laws (Austin & Harper, 2018); yet

another looked at non-consensual 'sexting' in the psychological and legal literature (Krieger, 2017). The search strategies also reflected a surprising diversity, from simple keyword searches (Chandler et al., 2019) to highly complex searches constructed by an Information Specialist (King & Gamarel, 2021). Our preliminary sense is that the searches described in the publications are more robust than expected. A higher proportion of articles utilised the input of an Information Specialist than anticipated, which produced searches that were more rigorous. Others that did not indicate the involvement of an Information Specialist or Librarian so far show much less rigor and reproducibility. As is the case with other areas, Information Specialist involvement demonstrably improves the quality of the searches and their reporting (Kallaher et al., 2020; Koffel, 2015; Rethlefsen et al., 2015). In an interdisciplinary arena where the databases searched require diverse subject and searching expertise, Librarian or Information Specialist involvement would seem even more necessary.

Coming from a health perspective there is a long tradition of making systematic reviews more rigorous to support evidence-based practice (*Cochrane Handbook for Systematic Reviews of Interventions*, 2021). The legal discipline lacks an equivalent tradition. In line with authoritative recommendations from health and social care disciplines (*Cochrane Handbook for Systematic Reviews of Interventions*, 2021; *JBIM Manual for Evidence Synthesis*, 2020) we have selected the Peer Review of Electronic Search Strategies (PRESS) (McGowan et al., 2016) evidence-based checklist developed by the Canadian Agency for Drugs and Technologies in Health as an evaluation tool for this investigation. We wish to trial adaption of this tool to interdisciplinary topics that reach beyond health. We have therefore selected articles dated after the publication of the updated PRESS Checklist in 2016. The PRESS checklist is regarded as best practice for research projects in human health that involve a Librarian or Information Specialist in the construction of the search (*Cochrane Handbook for Systematic Reviews of Interventions*, 2021; *JBIM Manual for Evidence Synthesis*, 2020).

Even in an environment dedicated to rigor, many search strategies are not reaching the standard required by the PRESS guidelines (Franco et al., 2018). Therefore it will not be surprising if search strategies in the health/legal field do not meet those guidelines either. Initial analysis also indicates that the PRESS guidelines, fashioned as they were for searching in medical databases, Medline in particular, are not an exact fit when applied to legal databases. Subject headings are not applicable for example. Interdisciplinary systematic reviews will need to develop their own guidelines and protocols that can flexibly adapt to discipline specific databases with varying search mechanisms offering different entry points to the materials. However, in the interim, we are finding that the PRESS guidelines still provide a robust foundation for considering the quality of search strategies. The PRESS guidelines are also aimed at peer review of the search strategy, where it is assumed that the initial search was authored by an Information Specialist or Librarian.

At time of writing, articles are still being reviewed for inclusion in this project. One outcome that has emerged is the significant number of reviews in the initial set that have to be excluded because they lack at least one author affiliated with a law department, law school or legal practice. Even articles with words like 'legal issues' and 'case law' in the title do not have a researcher affiliated with law in the research team or search the legal databases (Normahani et al., 2020; Podgorica et al., 2020; Rahimzadeh et al., 2020). The focus of these excluded studies may well not mandate such a requirement; for the purposes of this project, however, they will not be included or analysed.

It appears that literature searches for systematic reviews undertaken in the intersection between mental health and law are additionally compromised by the evolving nature and heterogeneity of the area, and the lack of guidelines and standards for cross-disciplinary searching (Baude et al., 2017).

This project is highlighting the benefits of a close collaboration between a public health researcher and information specialists. It is enabling the researcher to better construct and refine library search skills which facilitates much more efficient use of research time. The quality of the outputs is much higher than if the project did not utilise the skills of librarians. The Information Specialists are also improving their purposeful search skills along with a much greater comprehension of the research process, particularly the need for in depth understanding and refining of the research question. This project demonstrates the significant benefits of researchers collaborating closely with information specialists, and the need for cross discipline involvement.

References

- Austin, N., & Harper, S. (2018). Assessing the impact of TRAP laws on abortion and women's health in the USA: A systematic review. *BMJ Sexual and Reproductive Health*, *44*(2), 128-134. <https://doi.org/10.1136/bmj.srh-2017-101866>
- Baude, W., Chilton, A. S., & Malani, A. (2017). Making doctrinal work more rigorous: Lessons from systematic reviews. *University of Chicago Law Review*, *84*, 37-58. <https://www-jstor-org.elibrary.jcu.edu.au/stable/pdf/44211824.pdf>
- Chandler, J. A., Harrel, N., & Potkonjak, T. (2019). Neurolaw today – A systematic review of the recent law and neuroscience literature. *International Journal of Law and Psychiatry*, *65*, 101341. <https://doi.org/10.1016/j.ijlp.2018.04.002>
- Cochrane Handbook for Systematic Reviews of Interventions*. (2021, February). Cochrane. <https://training.cochrane.org/handbook/current>
- Forster, B., & Catterall, J. (2021). Quick and dirty does the job. *Incite*, *42*(2). Retrieved April 20 2021, from <https://read.alia.org.au/incite-marchapril-2021>

- Franco, J. V. A., Garrote, V. L., Escobar Liquitay, C. M., & Vietto, V. (2018). Identification of problems in search strategies in Cochrane Reviews. *Research synthesis methods*, 9(3), 408-416. <https://doi.org/10.1002/jrsm.1302>
- JBIMES Manual for Evidence Synthesis*. (2020, 2020). Joanna Briggs Institute. <https://doi.org/10.46658/JBIMES-20-01>
- Kallaher, A., Eldermire, E. R. B., Fournier, C. T., Ghezzi-Kopel, K., Johnson, K. A., Morris-Knower, J., Scinto-Madonich, S., & Young, S. (2020). Library systematic review service supports evidence-based practice outside of medicine. *Journal of Academic Librarianship*, 46(6).
- King, W. M., & Gamarel, K. E. (2021). A Scoping Review Examining Social and Legal Gender Affirmation and Health among Transgender Populations [Review]. *Transgender Health*, 6(1), 5-22. <https://doi.org/10.1089/trgh.2020.0025>
- Koffel, J. B. (2015). Use of recommended search strategies in systematic reviews and the impact of librarian involvement: a cross-sectional survey of recent authors. *PLoS ONE [Electronic Resource]*, 10(5), e0125931. <https://doi.org/10.1371/journal.pone.0125931>
- Krieger, M. A. (2017). Unpacking "Sexting": A Systematic Review of Nonconsensual Sexting in Legal, Educational, and Psychological Literatures. *Trauma, Violence, and Abuse*, 18(5), 593-601. <https://doi.org/10.1177/1524838016659486>
- McGowan, J., Sampson, M., Salzwedel, D. M., Cogo, E., Foerster, V., & Lefebvre, C. (2016). PRESS peer review of electronic search strategies: 2015 guideline statement. *Journal of Clinical Epidemiology*, 75, 40-46. <https://doi.org/10.1016/j.jclinepi.2016.01.021>
- Normahani, P., Sounderajah, V., Harrop-Griffiths, W., Chukwuemeka, A., Peters, N. S., Standfield, N. J., Collins, M., & Jaffer, U. (2020). Achieving good-quality consent: review of literature, case law and guidance. *BJS open*, 4(5), 757-763. <https://doi.org/10.1002/bjs5.50306>
- Podgorica, N., Flatscher-Thöni, M., Deufert, D., Siebert, U., & Ganner, M. (2020). A systematic review of ethical and legal issues in elder care. *Nursing Ethics*. <https://doi.org/10.1177/0969733020921488>
- Rahimzadeh, V., Knoppers, B. M., & Bartlett, G. (2020). Ethical, Legal, and Social Issues (ELSI) of Responsible Data Sharing Involving Children in Genomics: A Systematic Literature Review of Reasons. *AJOB Empirical Bioethics*, 11(4), 233-245. <https://doi.org/10.1080/23294515.2020.1818875>
- Research Support Community Day 2021. (2021). *From support to collaboration: joining the research team [video]*. YouTube. <https://www.youtube.com/watch?v=Zl-E82gUXmA&t=424s>

Rethlefsen, M. L., Farrell, A. M., Osterhaus Trzasko, L. C., & Brigham, T. J. (2015). Librarian co-authors correlated with higher quality reported search strategies in general internal medicine systematic reviews. *Journal of Clinical Epidemiology*, *68*(6), 617-626. <https://doi.org/10.1016/j.jclinepi.2014.11.025>

Rethlefsen, M. L., Kirtley, S., Waffenschmidt, S., Ayala, A. P., Moher, D., Page, M. J., & Koffel, J. B. (2021). PRISMA-S: an extension to the PRISMA Statement for Reporting Literature Searches in Systematic Reviews. *Systematic Reviews*, *10*(1), 1-19. <https://doi.org/10.1186/s13643-020-01542-z>